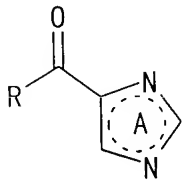
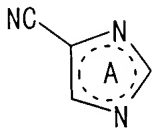
(1) (AMENDED) A method for producing a compound of the formula:



(III)

wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group and ring A is an imidazole ring which is optionally substituted further, or a salt thereof, which method comprises reacting a compound of the formula:



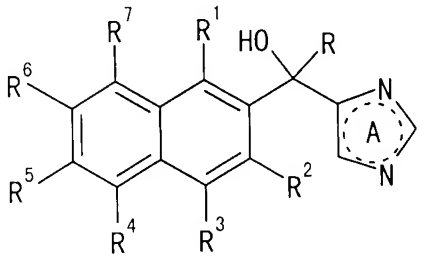
(I)

wherein ring A is as defined above, or a salt thereof, and a compound of the formula:

(II)

wherein M^1 is an alkali metal atom or a group of the formula: -Mg-Y^1 where Y^1 is a halogen atom, and R is as defined above, or a salt thereof, and bringing the resulting product into contact with an acid.

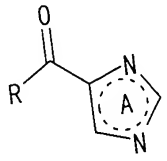
(2) (AMENDED) A method for producing a compound of the formula:



(V)

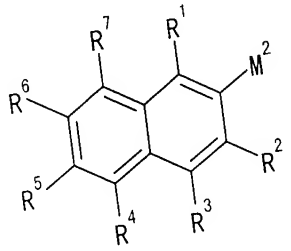
wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, ring A is an imidazole

ring which is optionally substituted further, and R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are each independently a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group, an optionally substituted amino group, an optionally substituted thiol group, an acyl group or a halogen atom, or a salt thereof, which method comprises reacting a compound of the formula:



(III)

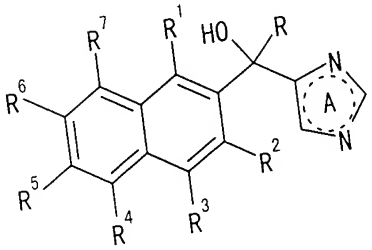
wherein each symbol is as defined above, or a salt thereof, and a compound of the formula:



(IV)

wherein M^2 is an alkali metal atom or a group of the formula: -Mg-Y^2 where Y^2 is a halogen atom, and other symbols are as defined above, or a salt thereof.

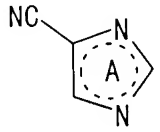
(3) (AMENDED) A method for producing a compound of the formula:



(V)

wherein R is an optionally substituted hydrocarbon group or an

optionally substituted heterocyclic group, ring A is an imidazole ring which is optionally substituted further and R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are each independently a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group, an optionally substituted thiol group, an optionally substituted amino group, an acyl group or a halogen atom, or a salt thereof, which method comprises reacting a compound of the formula:

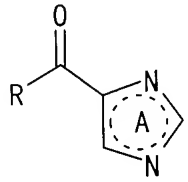


(I)

wherein ring A is as defined above, or a salt thereof, and a compound of the formula:

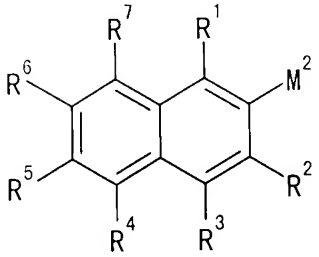
(II)

wherein M^1 is an alkali metal atom or a group of the formula: -Mg-Y^1 where Y^1 is a halogen atom, and R is as defined above, or a salt thereof, and bringing the resulting product into contact with an acid to give a compound of the formula:



(III)

wherein each symbol is as defined above, or a salt thereof, and then reacting this compound and a compound of the formula:

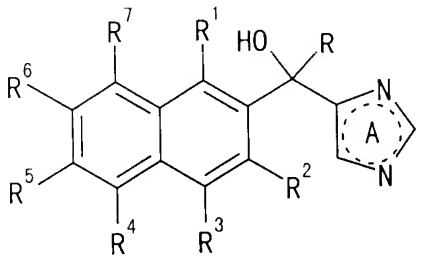


(IV)

wherein M^2 is an alkali metal atom or a group of the formula: -Mg-Y^2 where Y^2 is a halogen atom, and other symbols are as

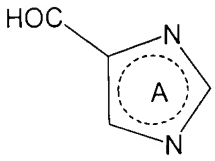
defined above, or a salt thereof.

(4) (AMENDED) A method for producing a compound of the formula:



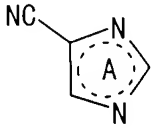
(V)

wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, ring A is an imidazole ring which is optionally substituted further and R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are each independently a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group, an optionally substituted thiol group, an optionally substituted amino group, an acyl group or a halogen atom, or a salt thereof, which method comprises reacting a compound of the formula:



(VI)

wherein ring A is as defined above, or a salt thereof and hydroxylamine or a salt thereof, subjecting the resulting product to dehydration to give a compound of the formula:

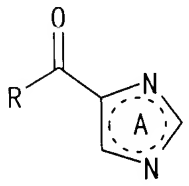


(I)

wherein ring A is as defined above, or a salt thereof, reacting this compound and a compound of the formula:

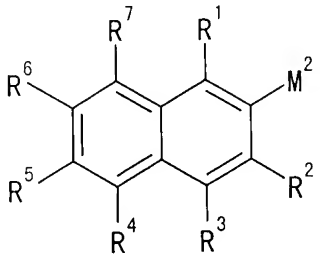
(II)

wherein M^1 is an alkali metal atom or a group of the formula: -Mg-Y^1 where Y^1 is a halogen atom, and R is as defined above, or a salt thereof, bringing the resulting product into contact with an acid to give a compound of the formula:



(III)

wherein each symbol is as defined above, or a salt thereof, and then reacting this compound and a compound of the formula:



(IV)

wherein M^2 is an alkali metal atom or a group of the formula: -Mg-Y^2 where Y^2 is a halogen atom, and other symbols are as defined above, or a salt thereof.

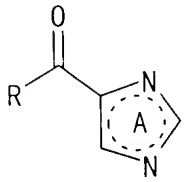
(5) (AMENDED) The production method described in claim (1), wherein the ring A of the compounds of the formulas (I) and (III) is an imidazole ring wherein the 1- or 3-position is optionally protected.

(6) (AMENDED) The production method described in claim (1), wherein R is an optionally substituted lower alkyl group, an optionally substituted lower alkenyl group, an optionally substituted cycloalkyl group, an optionally substituted phenyl group or an optionally substituted pyridyl group.

(7) (AMENDED) The production method described in claim (1), wherein R is a lower alkenyl group, a cycloalkyl group, a phenyl

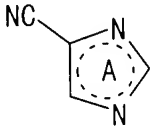
We Claim:

(1) (AMENDED) A method for producing a compound of the formula:



(III)

wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group and ring A is an imidazole ring which is optionally substituted further, or a salt thereof, which method comprises reacting a compound of the formula:



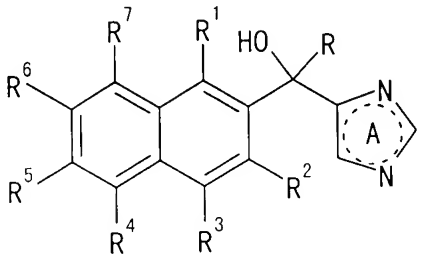
(I)

wherein ring A is as defined above, or a salt thereof, and a compound of the formula:

(II)

wherein M^1 is an alkali metal atom or a group of the formula: -Mg-Y^1 where Y^1 is a halogen atom, and R is as defined above, or a salt thereof, and bringing the resulting product into contact with an acid.

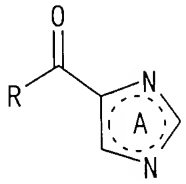
(2) (AMENDED) A method for producing a compound of the formula:



(V)

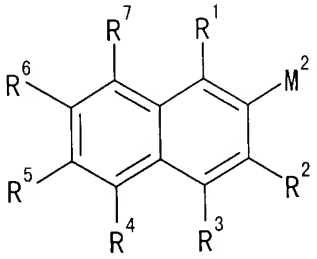
wherein R is an optionally substituted hydrocarbon group or an

optionally substituted heterocyclic group, ring A is an imidazole ring which is optionally substituted further, and R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are each independently a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group, an optionally substituted thiol group, an optionally substituted amino group, an acyl group or a halogen atom, or a salt thereof, which method comprises reacting a compound of the formula:



(III)

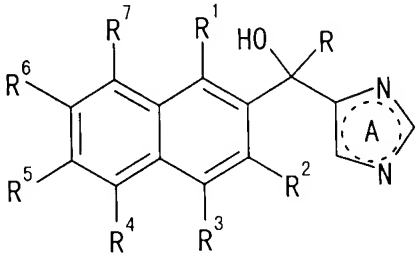
wherein each symbol is as defined above, or a salt thereof, and a compound of the formula:



(IV)

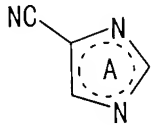
wherein M^2 is an alkali metal atom or a group of the formula: -Mg-Y^2 where Y^1 is a halogen atom, and other symbols are as defined above, or a salt thereof.

(3) (AMENDED) A method for producing a compound of the formula:



(V)

wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, ring A is an imidazole ring which is optionally substituted further and R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are each independently a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group, an optionally substituted thiol group, an optionally substituted amino group, an acyl group or a halogen atom, or a salt thereof, which method comprises reacting a compound of the formula:

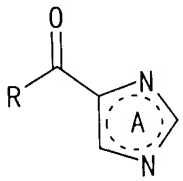


(I)

wherein ring A is as defined above, or a salt thereof, and a compound of the formula:

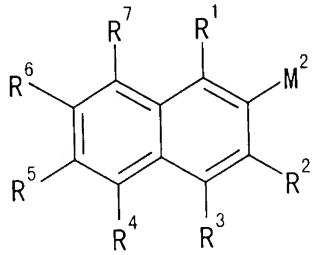
(II)

wherein M^1 is an alkali metal atom or a group of the formula: -Mg-Y^1 where Y^1 is a halogen atom, and R is as defined above, or a salt thereof, and bringing the resulting product into contact with an acid to give a compound of the formula:



(III)

wherein each symbol is as defined above, or a salt thereof, and then reacting this compound and a compound of the formula:

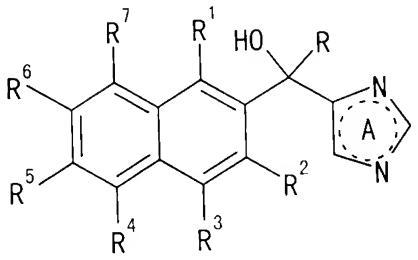


(IV)

wherein M^2 is an alkali metal atom or a group of the formula:

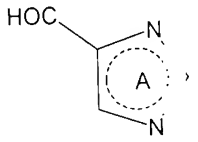
-Mg-Y^2 where Y^2 is a halogen atom, and other symbols are as defined above, or a salt thereof.

(4) (AMENDED) A method for producing a compound of the formula:



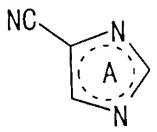
(V)

wherein R is an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group, ring A is an imidazole ring which is optionally substituted further and R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are each independently a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group, an optionally substituted thiol group, an optionally substituted amino group, an acyl group or a halogen atom, or a salt thereof, which method comprises reacting a compound of the formula:



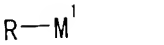
(VI)

wherein ring A is as defined above, or a salt thereof and hydroxylamine or a salt thereof, subjecting the resulting product to dehydration to give a compound of the formula:



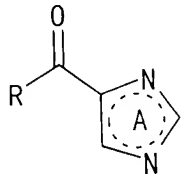
(I)

wherein ring A is as defined above, or a salt thereof, and a compound of the formula:



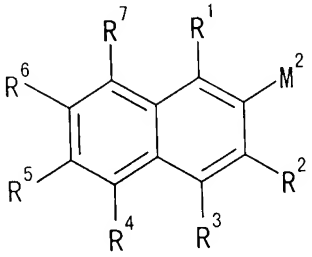
(II)

wherein M^1 is an alkali metal atom or a group of the formula: -Mg-Y^1 where Y^1 is a halogen atom, and R is as defined above, or a salt thereof, bringing the resulting product into contact with an acid to give a compound of the formula:



(III)

wherein each symbol is as defined above, or a salt thereof, and then reacting this compound and a compound of the formula:



(IV)

wherein M^2 is an alkali metal atom or a group of the formula: -Mg-Y^2 where Y^2 is a halogen atom, and other symbols are as defined above, or a salt thereof.

(5) (AMENDED) The production method described in claim (1), wherein the ring A of the compounds of the formulas (I) and (III) is an imidazole ring wherein the 1- or 3-position is optionally protected.

(6) (AMENDED) The production method described in claim (1), wherein R is an optionally substituted lower alkyl group, an optionally substituted lower alkenyl group, an optionally substituted cycloalkyl group, an optionally substituted phenyl group or an optionally substituted pyridyl group.

(7) (AMENDED) The production method described in claim (1), wherein R is a lower alkenyl group, a cycloalkyl group, a phenyl group, a pyridyl group, or a lower alkyl group optionally substituted by a halogen atom.

(8) (AMENDED) The production method described in claim (1), wherein R is a C_{1-6} alkyl group.

(9) (AMENDED) The production method described in claim (1), wherein R is an isopropyl group.

(10) (AMENDED) The production method described in claim (2), wherein M^2 is sodium, potassium or a group of the formula: $-Mg-Y^2$ where Y^2 is a halogen atom.

(11) (AMENDED) The production method described in claim (1), wherein the reaction product of a compound of the formula (I) or a salt thereof and a compound of the formula (II) or a salt thereof is brought into contact with a sulfuric acid.

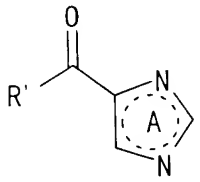
(12) (AMENDED) The production method described in claim (1), wherein not less than 3 equivalents of the compound of the formula (II) or a salt thereof is used per one equivalent of the compound of the formula (I) or a salt thereof.

(13) (AMENDED) The production method described in claim (1), wherein the compound of the formula (I) or a salt thereof and the compound of the formula (II) or a salt thereof are reacted in tetrahydrofuran.

(14) (AMENDED) The production method described in claim (1), wherein the compound of the formula (I) or a salt thereof and the compound of the formula (II) or a salt thereof are reacted in not

less than 50 equivalents of a solvent relative to one equivalent of the compound of the formula (I) or a salt thereof.

(15) A compound of the formula:



(IIIa)

wherein R' is an optionally substituted alkyl group having 3 or more carbon atoms, or a salt thereof.

(16) The compound of claim (15), wherein R' is an optionally substituted branched alkyl group having 3 or more carbon atoms.

(17) 1-(1H-Imidazol-4-yl)-2-methyl-1-propanone or a salt thereof.

(18) The production method described in claim (2), wherein the ring A of the compounds of the formulas (III) and (V) is an imidazole ring wherein the 1- or 3-position is optionally protected.

(19) The production method described in claim (2), wherein R is an optionally substituted lower alkyl group, an optionally substituted lower alkenyl group, an optionally substituted cycloalkyl group, an optionally substituted phenyl group or an optionally substituted pyridyl group.

(20) The production method described in claim (2), wherein R is a lower alkenyl group, a cycloalkyl group, a phenyl group, a pyridyl group, or a lower alkyl group optionally substituted by a halogen atom.

(21) The production method described in claim (2), wherein R is a C_{1-6} alkyl group.

(22) The production method described in claim (2), wherein R is an isopropyl group.

(23) The production method described in claim (3), wherein the ring A of the compounds of the formulas (I), (III), and (V) is an imidazole ring wherein the 1- or 3-position is optionally protected.

(24) The production method described in claim (3), wherein R is an optionally substituted lower alkyl group, an optionally substituted lower alkenyl group, an optionally substituted cycloalkyl group, an optionally substituted phenyl group or an optionally substituted pyridyl group.

(25) The production method described in claim (3), wherein R is a lower alkenyl group, a cycloalkyl group, a phenyl group, a pyridyl group, or a lower alkyl group optionally substituted by a halogen atom.

(26) The production method described in claim (3), wherein R is a C_{1-6} alkyl group.

(27) The production method described in claim (3), wherein R is an isopropyl group.

(28) The production method described in claim (3), wherein M^2 is sodium, potassium or a group of the formula:
$-Mg-Y^2$ where Y^2 is a halogen atom.

(29) The production method described in claim (3), wherein the

reaction product of a compound of the formula (I) or a salt thereof and a compound of the formula (II) or a salt thereof is brought into contact with a sulfuric acid.

(30) The production method described in claim (3), wherein not less than 3 equivalents of the compound of the formula (II) or a salt thereof is used per one equivalent of the compound of the formula (I) or a salt thereof.

(31) The production method described in claim (3), wherein the compound of the formula (I) or a salt thereof and the compound of the formula (II) or a salt thereof are reacted in tetrahydrofuran.

(32) The production method described in claim (3), wherein the compound of the formula (I) or a salt thereof and the compound of the formula (II) or a salt thereof are reacted in not less than 50 equivalents of a solvent relative to one equivalent of the compound of the formula (I) or a salt thereof.

(33) The production method described in claim (4), wherein the ring A of the compounds of the formulas (I), (III), (V) and (VI) is an imidazole ring wherein the 1- or 3-position is optionally protected.

(34) The production method described in claim (4), wherein R is an optionally substituted lower alkyl group, an optionally substituted lower alkenyl group, an optionally substituted cycloalkyl group, an optionally substituted phenyl group or an optionally substituted pyridyl group.

(35) The production method described in claim (1), (2), (3) or (4), wherein R is a lower alkenyl group, a cycloalkyl group, a

phenyl group, a pyridyl group, or a lower alkyl group optionally substituted by a halogen atom.

(36) The production method described in claim (4), wherein R is a C_{1-6} alkyl group.

(37) The production method described in claim (4), wherein R is an isopropyl group.

(38) The production method described in claim (4), wherein M^2 is sodium, potassium or a group of the formula:
$-Mg-Y^2$ where Y^2 is a halogen atom.

(39) The production method described in claim (4), wherein the reaction product of a compound of the formula (I) or a salt thereof and a compound of the formula (II) or a salt thereof is brought into contact with a sulfuric acid.

(40) The production method described in claim (4), wherein not less than 3 equivalents of the compound of the formula (II) or a salt thereof is used per one equivalent of the compound of the formula (I) or a salt thereof.

(41) The production method described in claim (4), wherein the compound of the formula (I) or a salt thereof and the compound of the formula (II) or a salt thereof are reacted in tetrahydrofuran.

(42) The production method described in claim (4), wherein the compound of the formula (I) or a salt thereof and the compound of the formula (II) or a salt thereof are reacted in not less than 50 equivalents of a solvent relative to one equivalent of the compound of the formula (I) or a salt thereof.